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American Chemical Services, Inc.
Oversight Summary Reports - 1996
Barrier Wall Alignment/Construction Field Work

USEPA/ARCS V Oversight Summary

Reporting Period: 1/16/96 to 2/14/96

Black & Veatch Project No.: 71670.660

Site Name/Location: ACS/Griffith, IN

USEPA Work Assignment Manager: Sheri Bianchin

Project Manager: Steve Mrkvicka

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson	4 to 6	PRP Contractor
Environmental & Foundation Drilling	3	Drilling Subcontractor
Giles Engineering	2 to 3	Drilling Subcontractor
Ohmicron	1	Training for field PCB analysis
BVWS	1-3	USEPA Oversight Contractor

Summary of field activities: This report includes oversight of the barrier wall investigation field work, the pilot test cell borings, and production well sampling and inspection.

The barrier wall investigation began with the intention of defining the limits of waste in two distinct onsite and offsite areas. Soil from borings found to contain greater than 10 ppm PCBs or 8,000 ppm total VOCs was classified as waste, based on field analyses of soil samples. A copy of data from a test run of field PCB analyses is attached. A total of 75 borings were installed.

In general, soil borings defined the limits of waste in the offsite area. However, soil borings SB205 and SB214 analyses exceeded waste criteria. SB205 was found to contain total VOCs near 100,000 ppm. An additional boring, SB205a was drilled about 40 feet west of SB205, on the Griffith Landfill access road. Soil samples from SB205a were below waste criteria. SB214 soil was found to contain 10.6 ppm PCBs. A duplicate sample from SB214 was sent to the CLP laboratory to confirm the results. No additional borings were installed near SB214, because borings on the proposed alignment on either side of SB214 were below waste criteria, and the alignment could not be moved further outward.

The proposed onsite barrier wall alignment was altered because soil sample results exceeded waste criteria in several borings. The initial onsite alignment was extended north to the cooling tower system, east to near the eastern fenceline, west to enclose the blending tank farm, and south to be connected with the offsite containment area.

Borings were installed to investigate conditions in the 2 proposed pilot test cells (one onsite cell and one offsite cell.) Four borings were installed for each cell. Zones of liquid waste materials were found in onsite and offsite borings.

ACS's 4 active production wells were sampled, and the 2 inactive production wells were inspected. The pump was allowed to run for approximately 15 minutes at each of the 4 active wells (IW1, IW2, IW3, and IW4) before sampling. The water appeared clear from each of the wells; however, water from IW3 had a sulfurous odor. Inspection of the inactive wells (IW5 and IW6) included measuring PID headspace and water level elevation and attempting to measure the elevation of the bottoms of the wells. The bottoms of the wells were not measured. An obstruction in MW5 prevented the probe from reaching the well bottom. A thin white liquid film was found on the water surface of IW6. The probe was not lowered to the bottom of IW6 to avoid introducing this liquid further into the aquifer.

Problems Encountered/Corrective Actions:

Extreme cold conditions tended to slow work progress. Equipment had to be thawed with torches, and water tanks and lines had to be drained daily.

While drilling soil borings, heaving sands flowed into hollow-stem augers. Drilling with the auger filled with water or bentonite slurry kept sands from flowing into the augers.

Encountering subsurface refuse at the southwestern portion of the offsite area hindered drilling progress. At locations where refuse prevented advancement of drilling, the boring was relocated a few feet until a suitable location was found.

Signature: Mutt Mullu Date: 2/22/96
S:\projects\ACS\\wos11696.wp5

******* OHMICRON ******

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****** OHMICRON ******

Please Wait 30 Minutes 01-16-96 16:56:46

01-16-96 17:08:43

****** OHMICRON ******

PROTOCOL: F

PCB

TECH ID : ______EXP DATE: _____

Data Reduct:Lin.Regression Xformation: Ln/L9tB Read Mode: Absorbance Wavelength: 450 nm Units: PPB

EQUATION OF LINE :

5lore = -0.887 Intercept = 0.643 Corr (r) = 0.9978

Transformed Data:

Conc	Abs
-1.39 0.00	1.928 0.540
1.61	-0.737

Calibrator Data:

Conc	Abs Diff	2CV	Predic %Diff
0.00	6.982 0.954		
Hean	9.968	2.1	
9.25	0.861 -0.054 0.829 0.027		0.20 -27.9 0.28 9.6
Mean	0.845 -0.015	2.8	0.23 -6.4
1.00	0.626 0.046 0.598 0.204		1.05 4.4 1.20 16.9
Mean	0.612 0.123	3.2	1.12 10.9
	0.323 -0.501 0.303 -0.003		4.50 -11.1 5.00 -0.1
Mean	0.313 -0.261	4.5	4.74 -5.5

Control Data:

Ctrl# Abs

Conc

Corr (r) = 0.9978

Transformed Data :

Conc	Abs
-1.39	1.928
0.00	0.540
1.61	-0.737

Calibrator Data:

Conc	Abs Diff	%CV	Predic %Diff
0.00	0.982 0.954		
Mean	9.968	2.1	
0.25	0.861 -0.054 0.829 0.027		9.28 -27.9 9.28 9.6
Mean	0.845 -0.015	2.8	0.23 -6.4
1.00	0.626 0.046 0.598 0.204		1.05 4.4 1.20 16.9
Mean	0.612 0.123	3.2	1.12
5.00	0.323 -0.501 0.303 -0.003		4.50 -11.1 5.90 -0.1
Mean	9.313 -0.261	4.5	4.74 -5.5

Control Data:

Ctrl#	Abs	Conc
i	9.490	3.06
In:		

Samples Data:

SPI#	Hbs	Conc	
1	0.777	0.42	
ID:		~~~~~	
2	0.705	0.68	
ID:			
3	9.519	1.83	
ID:			
4	0.335	4.24	

10:____

Matt Masteman 23 477 OFF6ITE

MAM 1/10/96

MANN 117196

1/17/96 Matt Martina W E PRIVING PERUSE; GTAINTO SOIL & WIRE SW PORTION OF OFFICITE BREIA NEAR THE PAN CONTINUES 10.25 SERDI ORIGINAL LOCATION CHG MOVED P adopt Dinulnia 15 stope 53/02 (045/15) BORNIG FONCHOUNG BETTER NOW! SOME THERE - 1000 HEM IN LEAGH SAMPLES LOOK MAM 1/17/96

wey 1/17/96 SANDY PELATIVELY CLEAN AT 8-10' DEPTH! -1155/AT SB102, BORING IS INTOO CLAY AT 120' SAMPLES LOOKED SANDY, REL CLEAN FROM 10-18, WITH SOME FINES, GRAVER BORNES 16 COHPLETE / 1205 AT SP201, HOW HOLE HAS ENDOWN -TEREO REFUSE AGAIN. THEY WILL PREMIDEN THS LOCATION - AND RO NO MOREBORINGS HERE BEENSE FURTHER DISCUSSION IS NECESSARY, SLURRY WALL CANNOT BE INSTALLED IN REDUSE, PHIL SAYS THEY WILL MOVE TO A NEW LOGATION ACTED PERCH LINEA. 1225 | DRILLERS BREAKING FOR WINCOM WILL START NEW PORINGS IN APTERNOON 1330 DAVE'S CREW E.F.D IS GRING TO THE ONSITE APPEA TO SET OP FOR SBO3. PINUS desem-GILES CHONGERING, 13 GATTING PEARY TO START ANOTHER SCRING, BUT HAS TO FINGH DECON PREST -1400 AT TRAILER, POUTE UPS OUT FOR MOST OF THE MORNING ONE MAN UMAG

Mg H Whastnaw WED ING NW HAR NOT BURNING - NO FLEUD ANALYSES THEIR TO HAKE PLAKE WITH THE 14301 AT \$3103 ONSITE BORNIGUS DOWN TO +12' DEEP RAIN HAR STOPPED SAMPLES IN 13 INTEROVAL HAVE BEEN plenden upplying in this input ARE NOT AS DARR AS THE DTHERS 58101 1102). PIO 125ADINIGS + 1000 PAH SHOWING UP IN SPRON. SILTY SAND COMPLETE AFTER NEXT SOON TO MAKE SUPE CLAY IS PRESENT. DAN SAIS THE CREW WILL HOT DO MAY MORE ROCINGS TODAY, BECAUSE GROUTING - DECOM UNI THE THE WEST OF THE DAY! -4551 AT OCT \$ ITE BURN & 1 88 202 THE FURTHEST NORTH OF THE SPIRED OFFSIE BORNOS, THEY man 1/1/196

Matty Materials Watt Washnah WAS POSITIVE. DANG SAID THAN UNITED AND THE SOIL FR 28 WED 1/17/06 TRY AGAIN, 1535 AT SB202A (NEW HOLE) THEY HAVE GOTTEN A NATIVE SAND SAMPLE AT THE BYR', AND HAVE NOT GOTTEN ANY MORE REFUSE THERE WAS SOME THO LEAVE SOE FOR THE DAY PLASTIC IN A SCOON FRONT PROVETING CEUEL THOUGH, 1600 AT SP202 A NATIVE SAND STILL 3 HOWING UP IN SPUT SOODS 2 13! 1640 AT STORA, RETURNS 18-20' SPOON; IT HAS BEDOME LOCKED IN THE A.S.A. ANNULUS_ PRILLERS ARE PULLING THE AUGERS TO FREE THE SPOON / 1715 AT SAZOZA AUGERS ARE OUT OF THE HOLE: DRIVERS HAVE ATTERD THE \$100N + 10005 -1725 AT SB202A, SPUT SPOON IS GRAN SIUT + SAND. THEY WILL RESUME DRILLING TOMORROW MORNING. 1735 ATTEMVER. GC IS TREADY, 2MO GC IS ALMOST READY. NO SAMPLES HAVE BEEN ANALYZED YET. THE HIDDOPHOSE D'E TEST FROM SB103 = 19.8 MAN 1117/96. MAN 1/17/96

9

Matt Masterna 64 Matt Bashed U THV 1/18/96 -WETHU, 1/18/96 0730 AREWE ONSITE, TEMP. 45°-50° F, WIND FROM NE CLOUDY SKIES. DRUL CREWS GETTING READY; GIVES ENG. RETURNING TO SB202A E.F.D. SETTING UP A SB104 0300 AT SBION DRULING BEGINS. 0820 A 50 04, 12 2 SPOONS HAD ONLY A FEW MICHES RECOVERY WOOD, ETC., IN SPOONS INDICATES DEBUS IS CHOSSING STUDING FROM 1 TO 3 and 31/2 TO 51/2 FEET. CUTTINGS AGE WIT, STAINED! 0830 PHOTO L FACING SE E.A.D. DRUGES REPOVING THE 6 TO 8 BORING AREA) SPLIT SPOON! CUTTINGS WIRE STATUED BLACK: SOME ARE DISIBUR ON PLASTIC UN FOREGROUND. 6' TO 8' SAMPLE IS GRAY SANDY SIT W/ SO HE SMALL GRAVELY EMICUY CLEAN: BETTER RECOURSEY! > 0845 HAT SB202A DPILLERS ARE GROUTING THE BORING PHIL SAID IHEY INT CLAY AT ~ 22' 0900 GILES DICILLARS FINISHING AT MAM 1/18/96 MAM 1/18/96

30RINGS (TOWARD SB201, WHICH UNISUNCESFUL BECAUSE OF REFUSE CORNER OF OFFSITE CONTAIN ITT HAS BEEN HYPIC CE THE SORWISS IN 119 LOCATION STAILING + DIDORS IN 12-5' BEDTHS, WITH PID PEADINGS LOCKATION STA SLSD REL MODE (1000) PPM JAMPUES LOCKING to dim sold

Matt Alastonal 41 Wast Mastronali THO. 1/18/96 THU. 1/19/96(EACAH TOOM 1030 CACIED RUW, OIC., TALLAD W/ STRUE MIKUICKA + BOB LANTS TO REPORT SITE ACTIVITIES, 1100 AT OFFSITE BORING SB263 DRILLERS HAVE ENCOUNTERED REFUSE TO ~ 12', BUT ARE NOW IN A GRATISH FINE SANDWING APAGARS NATIVE 1115 ONSITE AT 58106 (S8105) IS COMPLETE) STANNING IS EUIDENT IN CUTTINGS BORENG DUWN TO 3'. PHUT 02 FACING SE DRILLING AT 58106, STAINED CUTTINGS ARE BUIDENT ON SURGACE. PHOTOS FACILIC NW. SOLL BORINGSBIRG, SPLIT SPOON SMPLE FROM BYL TO \$ 12 POET! 1120 | 58106 DOWN TO 8 SAMPLE PROM 6'TO 8 LOOKS CLEANER THON 3/9 70 5/21 1135 AT 98203, SPLIT 5000N FROM 30'TO 22' 21'TO 23' SPUT SPOON HAS CHAY FROM 22 TO 23 BORING 15 complete AT 23' 1200 SB106 COMPUTE: CLAY ENCOUNTERED AT ~ 20-22. DAVILLERS BREAKING, 1300 DUMERS WILL DO DUTE NORT BORNING MAN 1/18/96

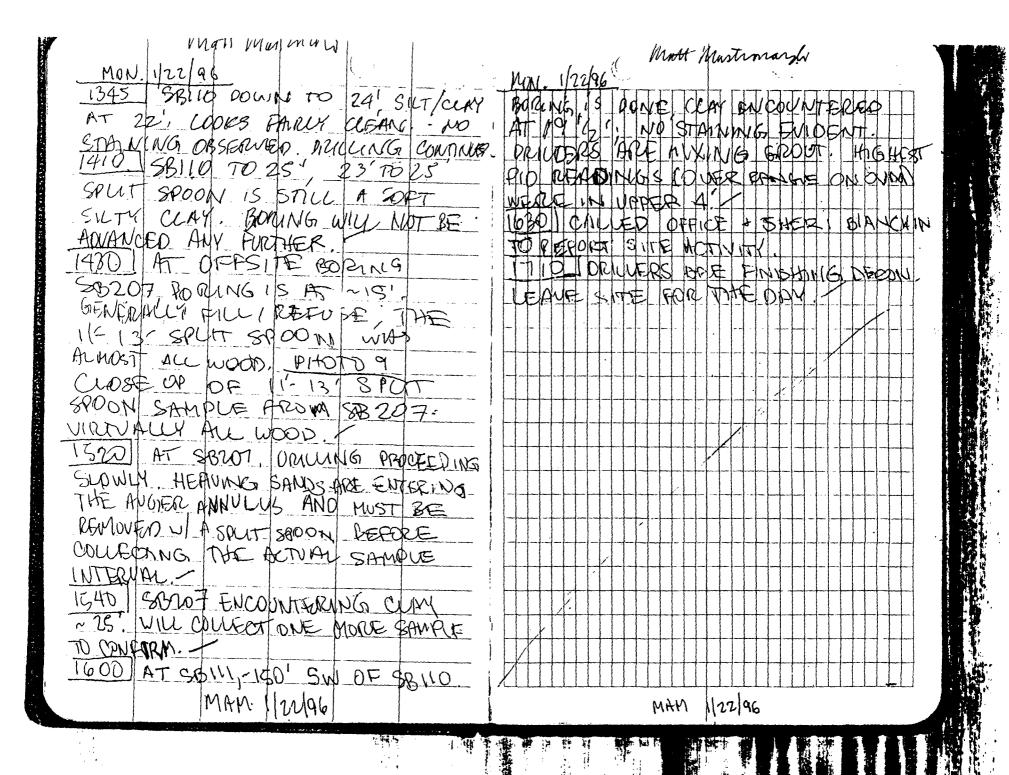
I DO DREW WILL STAPE GROOT DECON + GROUTING ASE COMPUTE 1420 AT SBIOT MONGER TRACES ONSTITE RAIN IS FAILING STEADILY WITH OCCASIONALY MERY HEAVY BURSTS. PID IS NOT FUNCTIONING WELL . DAVE WILL DO REAGINIST SLOWIN, MITTING REFUSE DID, W/ NUGICE RETUSAL PELOCUTIVES PORTHE 11530] WANING SITE TO PER OFFICE. DAVE & PHIL WILL SINE ME FINIS WED ON SDEAMES TOMORROW MAN 1/18/96

VICI, 11/19/96 LARRIVE ONSITE TEMP - 70 F. WIND PROP NW PARTLY CLADY SKIFS. EFD 1614ES DRILLES ARE ONSITE. 0740 | EFO SETTING UP HT 80108 DAVE SMO THEY FINISHED SB107 YEST. AFTERNOON, WITH NO WUSUAL FINDINGS. CULD IS AMCING SETTING UP DIFFICULT. 0820 GILES IS GATTING EQUIPHENT THOUGO, USING TOROHES. 0830 [AT \$8108 | PRILLING BEGINS .. PHU SMO THAT SB 204 FINISHED , AT 20-8 FEET, WHERE CLAY WAS ENCOUT-ERED NO GC OR PUB ANALYSES POWE BEEN PERFORMED TODAY, BUT MARK WAS ALLE TO PUN SOME 60 LAST NIGHT. MARK THINKS THAT HE WILL DO A LARGE BATELL OF POB SMIPLES MI ONCE PHOTO A FACING S SPLIT SPOOD SAMOUR FROM SBIDS. IT IS A 3 SPOON BECAUSE MORE VOLUME IS NEEDED FOR DINSICAL RUALY SES. THIS GRAVISH SAMO IN HOVERN OF WHAT WAS FOUND IN THIS ARRA ANDUS THE TRACKS. 1000 AT SOROS, OPHLERS HAVE MAN 1/19/96

FRI, 1/19/92 13 NOT FUNCTION-10201 SBIOS IS COMPUTATE THE CLAY PID MOTT LAMPEARS TO HAVE LOOK /CLAY INVERHACE TOFE GILES A PUBLIES STILL SHMT DOWN BELIEVED 1710 15 NOT FUNCTIONING. I SPOKE U rimply party (In many dall the style to lung ABUEL tro PUN 7 VOC ANALYSES MASEKD SAGATUDIO OPPUNDATI DENGE (17 HIGH) DUT HARK HAS NOT FINISHED THE CALCULATORYS TO OSTERAINE THE ACTUAN CONCENTRATIONS 1040 AT 88205 DOWN TO GARBAGE + TYPE DOOR 5 AT BACAGROUND CUTTONEGS ANGE BROWN STAINED SAND PHOTD 5 FACING NW OLIUMG AT SB 205. BROWN-STOTNED IN 15 ONS HE, EAD RUS IS SET UP ALONG W. FERMETER OF BORINGS 1-150 N. OF 15 THE 349 BORNES NORTH OF 58101 11 \$3205 DALLING MAM 1/19/196

West Mastra v Matt Mannovi FRI. 1/19/96 FRI 1/19/96 PROCEEDED THROUGH STAINED SAND INTO A CLEANER SAND. AT SBIOG BORING IS DOWN TO ~15. 30 FAR, THIS LOCATION HAS UP + ANISH NG FOR THE DAK! UPTOK WILL REMAIN TO BUN VOC + DCB APPEARSED LOSS STAINED THAN THE BORINGS AT THE AR TRACKS. THE 15101 OFFSITE FOR THE DAY SURPARE SOIL TO 5' HAS LESS STAINING AND DOOR, Y TOPO AT SBROS, DRILLED TO CLAY AT SPOON W/ STIFF GRAY CLAY AT SBZOS CLAY INTERPACE APPEARS CLEAN, 1220 AT SBIOG, DRIVER TO CLAY; SPUT SPOON AT ~ 19' SHOWS CLM WINTERFACE CLEAN. 1300 DRILL CROWS BREAKING TO GROUT + DEPAN. 13 GO DAVE PHIL DECIDE THERE WILL BE NO MORE BORINGS TOOM. 1410 (CALLED BUUS OFFICE TO REPORT SITE ASSIVITY TO ROB LANTZ! 1420 AT TRAILER, MARK PROCI CONTINUES PREADING DCB SAMPLES HE PLANS TO FINISH PUNNINGTHE ANMUSES TOOM MAM 1/19/96 MAM 1/19/96

un py masymano Matt Masternadi MON 1/22/96 WITH SOME GARDAGE OPOR 0945 TARRIVE ONSITE, TEMP - 40°F WIND FROM SW., CLEAR SKIES. MW PERSONNEL PETER VAST, DANEPIECZYNSKI, PHIL SMITH ARE ONSITE. ALSO A NEW FIELD TECH: JOHN, WILL BE 141 BOSTING \$ 141 TO PUNNING FIELD SAMPLES, AT SOZOG HAT STREE 1020 LOOKED AT DATA FOR VOCS FROM FIELD ANALYSES NOME AT OR NEAR 8000 PPM; ALL BELOW, SOME GORE ANALYSES TO BE RUN, THOUGH. PCE ANALYSES ARE COMPLETE, BUT DILUTION CALCULATIONS ARE NOT DONE PETE 1. SONS I CAN GOT A COPY OF DATA WHEN IT IS READY 1100 DILLYING BEGINS AT 072517F BORINE S& 206 -1130 DOWN 10 11' AT SAZOC. Some PARER, ETC IN 15 10" BUT NO HEAVY WERUSE. AND GRIPM SILTM SIGNED, WY SOME SOLVEN 1145 AT S\$200, 19 TO 21 = GOON 1 IS STUCK IN HOLE; PROBABLY SONO DOMUNG CONTINUES AFARMER SAND BRIDGED; DRILLERS FULLING MUGERS. KNOWS FROM 3.5 6,000 9 1223 DT 88 206, DOWN TO 23/ STYLL YN GRAY SILTY JAND MAM 1/22/96 MPM 1/22/96



Most Maskouly brigges me was no FIX ITT. HOUR IS DOWN TO 17 1. HHJ SOME 1914 STANING VM CHUELS 15 . SOME PURPLE STATING ALSO 713 OF M. PHOTO 10 FARING W PURPLISH MATERIARY IM A JAY PROM 10501 AT SKILL DRILLERS ARE DONE NG WILL BEGIN DOLLING 5876A POOD RECOVERY DUE TO REFUS ATT 928/13 WITH SOME OUT SHEEN WATER FOURING BUT MAN 1/28/96

mat Wasternarde Mart Master WC WED.1/24/96 OF PROFILE BORINGS, SO'S OF SISTO VERTICAL PROFILE IS TYPICAL BLACE INTERNAL, BUT 128.5 TO 30.5 SAMPLE WAS CONFORD TO CONFURM CUM. 1045 AT SBIIG, ONSITE IT IS LOCATED STANNING TO +41, SOME ODORS GRAY ABOUT SO' E OF SBIB. FUDINGS ARE SAND W/ books BELOW, HATTONG CLAY TYPICAL STORE DATUR STANDING IN 155 2 sompres, FARM CHEAN SAND BOWN SE EXERAT GENERAT LANDFILL; TAKEN TO CLAN AT ~ 185'. -1110 DRILLERS ARE GROOTING SBILL, WILL PROB. MOVE SW OF SBIDI ~ 100' 1630 VAT TRATLER, TALKED W/ SHEER BIANICHN RESIDER ACTIVITY SHE WA ONSITE TO DELIVER RESPONSE TO COMMEN SFTER A BREAK. 1300 ONSITE AT 58117 ~50 W,05. SBIOI, BURING PLACED HERE SECANSE TO PRETER LAGIT AND TO CHECK ON PROCESS 38101 HAD PCB HITS > 10 PPM- -17 10 OFFICIAL HOR ONLY 1330 JAT SBIIT, SAMPLES HAVE LOOKED LIKE STON : STANNED RUBER TO - 512 GRAY SIND FROM THERETHER TO GLAY. 1400 SBIT DONE CLAY SAND INTERFACE LOOKED CLEAN . _ 1445 AT OFFSITE BORING 381 212. 17 15 THE FIRST OF THE 200- FOOT BOALNUS SPACED FROM SOUD, NORTH 1513 1850217 COMPLEXE PLAY AT ~ 28", NO REPUSE GROOTENS, BUT THOUSE CORREGE COS HAS PROFERED 1680 AT 58118 ONSET 17 15 MAN 1/24/96 MAPA 1/20/96

Watt Waster 1 THU. 1/25/96 0730 ATTEME ONSIVE- TEMP 12'F WIND FROM BNE ROB LANTZ ARRIVES AUSO DILLERS GETTING READY TO SET UP MW REPS. ARE. ALSO GETING READY 2 RIGIS + FELPEUBE, WILL BE RUNWING TOOKY, / 0800 ONSITE, AT \$319, LOCATED ABOUT 50' SW OF SAIIS, TOWARD SE SECTION OF BARRIER WALL SPRINGS 0830 | SBI19 DOWN TO ~ 13', SOME OILY STANING IN 11 TO 13 SPOON IN SAND - 212 mm 1/25/96 0900 ISBERS IN PROGRESS. CHEAN SAND SO FAR 10-10' 3821315 LOCATED AT SE PERAMETER NEAR SIGN FOR ENTRANCESTO THE IND PARK I LANGELL -0915 SBIIN COMPLETE, DRILLERS ARE GRATING SB & DIMODOWN TO 17 TO 17 SAMPLE SHOWS THE CHANGE PRON CLEAN TO DIPTI SAMUE WHICH HOD OPORS. TOOK RIFB CLEAN SAMPLE 2000 CHANGING SAMOVE MAN Postac

Matt Mastanall TW. 1/25/20 BUILDING THIS BORING IS SASYRD BONIEL CULAM UPPER STAD NUMBER OF thy his tophay 1 mid 40 la 53217 100 NE ALSO CULAY MAKS ADJT 1291 SPAE STAINING AUT WO PHASE LIQUID FROME CLAY MONTH INTINEER BOUING PAHE SH 000 PS IGB JUBI DONNE! CLAY A MAN 1/25/96

Mit Mastra Watt Walrach THU, 1/25/96 THERE WAS SOME DISCOLORATION OF SAND IN SB213, BUT NOT AS SEVERE BACKIER WALL DRILLING AS 5B217 / 1530 DRICHERS (GILES) DECONNING PETER NAGIT (MW) TO AFTER SB213 EFO SROKE THEIR DATA. MAN LINE WINCH CABLE, WILL HAVE TO REPLACE! 1600 AT SBIZZ, EFD DRILLING ON SW PERMETER, IT IS LOCATED 50' N. OF SB117, WHICH WAS PLACED ANAY BOM SBIOL 1625 SB128 COMPLETE IT ENCOUNT. FRAN CLAY AT ~ 19.5: FINDINGS WERE ARRIVER WALL BETWEEN 3617 TYPICAL = SOME CONTAM WAS VISIBLE W 58109. BOWNULLENIONNES LARGE TYPICK 1ST 4 FEET, (STAINING YODORS) GRADING TO COOT A SOMEWHAT PROPANIE LYNKE LIGHT GAM STHINING GRADINIS TO STIFE GRAY CLAY. 1650 CALLED SHERI BIANOHIN (EAR) JO REDDRY SIRE ACTIVITY. LEFT SITE FOR THE DAY. MAM 1/25/96 MAM 1/28/76

1111 H Mant a14 12 FRI- 1/26/46 1000 STARTING S8215 AT FENCEUNE IN WOODY AREA THEY ARE USING 3" \$.S. FOR GEOTECHNICAL SAMPLING. / 10501 AT WIT. AT SBZIS, SOIL CHANGES COUR FROM A LIGHT BROWN STOND TO 11 STONED GRIAY SAND, W/ SOLVENT DOOR 11 D FINISHING SBUS, CLAY CORMINDIN STHUED ABOVE CLAY SBIZA, FINDING CLYMAT 18.5 IT WAS LOCATED SO FOR SBILG, VISUMUY, SAMOUCH ARE PEUFIVELY CLAN. < 150 EFD OPPLYING 17 5B125. THEY HAVE HAT AN OLD COREND MAED PITOTOS 13 + 14 FACING # CORNOADO PLASTIC WRAPPED AROUND THE Proces At SBYCK. 1210 SOIZS LOCATION ABONDONED. SAMPUS WERE CONVECTED BOWN TO MAM 1/26/96

"yet Mastrudy FDI. 1/26/96 UARNUS 4-ODORS AND STAINING THIS THRE OF STAINING WAS DESERVED IN OTHER GORINGS WHERLE POBS WERE > 1230 DRILLERS DEGONNING. BBO NO MORRE COULINGS 40004. DAVE SAID LOWER ARYLER INVESTIGATI WILL BEGIN ON MON WORKING AS THEM STARTING A 10-DAY SHIPT HE FOURWING THOM TO THE PRINT TO

MAM 1/26/16

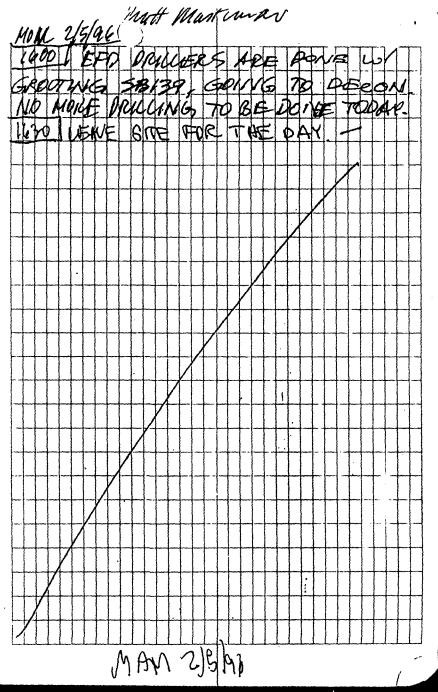
mon. 1/12/96 most Mashells MON 29 Most Mastrum () MI JAN 80, 1996. 0930 ARRIVE ONSITE. BARRINGR WALL STE EUGE. EFO STARTING SB126 AT DRILLING TO CONTINUE TODAY, TEMPA 10°F., CLOUDY, GILES COFFETE CLEW) THE E EDGE OF THE OWS THE AREA 18 HERE, BUT THEIR STEAM CLEANER 50 NW DE 58125, 1 START DRILLING YET; NEED TO DECORD 1600 At 88129, CLOY 41 AT 19.5 COMEWHAT OUY/STAINED HROM 11/13 FROM. EIRST. 1530 AT S6217(OFFBITE) DOWN TO 1030 | EFD (ONSITE OREW) IS STUCK WHITEL TABLE + 401 PEED IN TOAFPY, SO NO PRILLING YET. GILES. AT W.T., STAINING, US BEGINNING.
CLEAN SAND ABOVE W.T.
1715 SD219 HATTING CLAY AT ~22'.
HT IS VERY SIFE, LODIES CLEAN, BORING STILL WORKING ON STEPP CLEANER. 1230 DULLING BEGINS, GILES CREW OFFSITE ARRA, IN WOODED ARRA, EFD COMPLETE AT THIS DEPTH. 15 DAILING AT SB125; PEDRILLING THIS BORING DELOW 13' BECAUSE THEN HIT THE OLD WATER LINE LAST FRIT COULD NOT CONTINUE. 1340] AT SB 216, HITTING CUPM AT 26, BORING HAD CLEAN SAND TO W.T. THEN SOME STANING BEGAN WATER TOOLE WAS BY ~ 15' STAINING + DOORS DOWN 1400 AT 88 125 HITTING CLAM AT ~19! SOIL WAS STANKED OILY PROJECTION, BUT NO FREE PHASE MAND SOME MAM/129/96 MAN Thaks

Matt hustings Most Marles TUE 1/20/96 SB129 COMPLETE UPPEZ SAMPLES 5/2) (6-8) WEIZE GRAVISHIBUT 15/0US STAINING, CLAY AT 0730' ARRIVE ONSITE BARRIER WALL DRILLING TO CONTINUE TEMP -5°F, WIND FAOM NW, LOWER AQUITER INVESTIGATION TO BEGIN, CARTER 1500 61063 13 SET OP AT 38220 HELM (BIV) IS ONSITE TO DUERSEE NEW EDGE! THE BORING WAS MO OBZO GILES DRILLING OFFSITE ON THE CORNER, BUT SCIENTEY IN PROM THE EDGE TO ROWN OF THE BIRPHER SBZIB, AT N. EDGGE OF THE OFFICIE WALL BOSE -ISAS | SB220 COMPLETE . CLAY AT 10 | SCAYISH STANDO STAND OCLOCI AREA. EFD AT SB127 AT E. PERINETER OF ONSITE AREA, DOWN TO -16% 0930 SB127 GOUPLETE CLAY AT + 19.5 , OD UN TO THE CLAY CLAY GOOD 1000 1 SB218 COMPLETE, CLAY AT -14. GRAYISH SAND, DOORS LECOW WATER TABLE 1630 NO MORE WORK TO BE DONE TODAY 1020 DAYSITE, OPILLING AT 88128, STILL @ E- EXGE OF SITE, SOME ODORS STAINING dreat sine actionity | Little tope pay AT - 9-10. 1130 SB128 COMPUETE AT 25.5', CLAY ATT 24.51. SOME STAINING AT 84 TO 10/2 ONSITE GILLS WORKING ON SB219 AT AIN SITE PORTION 1300 SB219 COMPLETE, SIMILAR TO 218, IN APPEARANCE OF SAMPLES. ONSITE EFD SET UP AT SBIZA AT 6. EDGE OF BOUNDARY WALL (ABOUT 30' S. OF SB120), -MAM 1/30/06 MAM 1/30/96

In mallman in FRI. 2/2/96 0830 MERAVE ONSITE TEMP. D'F, OVERCAST, BARGUER WALL, GEOPPOOLE, LOWER AQUIPER INVEST. TO CONTINUE to DAY. 0930 SPOKEW/ M.W. BEP, PETER VAGT to GET UPDATED ON SITE ACTIVITY. -(I WAS NOT DNSITE WED OR THU.) -OFFSITE BARRIER WALL BOKINGS ARE COMPLETE (NUMBERED TO 222) DOWNES # 2/4 HAD PCE, ABOUT 10 FOR CONE SAT ANALYSIS). ALSO, PHIL USED THE AM RIG TO TRY SOME PILOT TEST CELL BORINGS. BUT VINYL GENORIDE WAS ~1.5 PPM IN THE BREATHING ZONE; WILL REQUIRE LEVEL B NO DELLING WILL TATGE PLACE TODAY. EFD RIG IS DOWN ALSO, THE GEOPEOBE OPERATOR HAD CHEST PAINS, SPENT THE NIGHT IN THE HOSPWAL, NO GEOPPOBE TOWN. -ON617E, BORINGS UPTO # 138 ARE DONE 1030 NO FURTHER ACTIVITY TO TAKE PLACE (OTHER THAN SETTING A WELL W/ ROTOSONE RIG- CONERED BY M AM 2/2/96

FRI. 2/2/26 CONTER HELM) ELT OR MANSTERS MAM 2/2/96

Matt Man In NW MONI- 2/5/96 1035 PARRIVE ONSWE. TEMP. ~15 °F CHEAR SKIES NO DRILLING DONE YET, ONSITE DAUG WILL RESUME W/ BORING SBIBG, STATUTED ON FRIDAY BEFORE RIG BROKE DOWN. P. VART (M.W.) HAS SHOWN ME THE LATEST BARRIER WALL ALIGNMENT: IT WILL CONNECT OFFSTRA MISITE WALLS WILL DISCUSS W/ PRPS TODAY, EFD DRILLERS ARE NOT HERE YET. 1200 EFO DRILLERS ARE AT SB136, FIXING THE BIGS WATER PUMP. [320] 513136 COMPLETE. CLAY AT 19.5. DRILLIERS AGE MIXING GROUT PLO BEAD FAIRLY HIGH AT CLAY SURFACE. 1500 EFO PRILLING SBISG ABOUT 50' SW OF SOISE, ONSITE. 1530 SB139, HITTING CLAY AT 1B.C. SOME BACK STANING SBEN AT -8' CLAY IS GRAY 1535 CAUTO SHEW BIANCHON SING BOXING. - CONCESNING MBM 2/3/96



TUE /2/6/96 1900 1900 mg 2 Mat Mat n An' TUE. 2/6/96 0800 ARRUNT ONSITE TEMP. 15 ~15°F, CLEAR SKIES, BARRIER WALL ORILLING TO CONTINUE TODAY, 1320 PAT 531 A3 ABOUT 20 NOR SBIN3, BORING IS DOWN TO ABOUT 101 AT 25 STAINING IS EUNDENT CUEARD SOND GROODS TOOLETY, BUAG ONSITE. 0820 AT S8140 ONSITE, AT W. END OF RR SPUR. CLAY IS HIT AT ~ 19! DAVE WILL SUBMIT A CLOSE UP OF B1/2 TO SAMPLE AT - 7 TO 9' DEPTH. 5/2 INTERNAL FROM SB 43, AUGRE SOLORI CHANGE IS EVIDENT 1359 SB 143 IS COMPLETE CLAY 0900 | EFD JECONHING, GETTING READY POR ANOTHER HOLE. 0930] EFD IS WORKING ON SB140, 18 AT 19.5 1 11435 AT IW-1, ACTIVE PRODUCTION WELL LOCATION ATSE PORTION OF THE 1+ 15 LOCATED ABOUT 50'N OF S&B, ABOUT TO W. OF SB137. -1005 SB140 IS DONE RESULTS WERE THE BOULD SHOE WHICH IS TYPICAL OF BORINGS IN THIS AREA: GRAY SAND WISOME DOORS DOWN TO CLAY, CLAY WAS STIPF + GRAY. -1025 EFD SETTING UP AT SBIAL AT NE PORTION OF THE SIME (AT NE EDGE OF BARRIER WALL BOUNDARY.) TO 55 | SB147 DOWN TO 10'. SENCE SOLU. LOOKED CHEER DIMONIT TWIV SAMPLYNON POINT, AT 08096 SHEN AT 46 TO 81 -1120 SB147 IS BONE ATT 22.5 CLAN BUT AND EDA WAS EDA JULO FROM 20.5 TO 22.5. BORING IS PROUT 20' W. OF SB106-Man 3/6/9/ MAN 2/6/96

TUE. 2/6/96 Mat Martmay 1530 PHOTO 48 PARING W. IW-2, INSIDE PLDG. NO OF THE DEFICE, DILL HAS DURGER SAMPLED THE WATER LOOKED JAT SBIA4 ON THE GRAVEL ROAD & OF THE PRODUCTION OFFICE DOWN TO VS SOME OUX VARCALISH -TYPE MAPIL IN SAMPLE AT - 101/ 1540) PHILLIS PURBING TW-3. 1600 TW-3 SAMPLING COMPLETE DOOMS FACING E. IW-3 PRODUCTION WELL LOCATION. WATER WAS CUERTE OUT HAD A SULTUROUS DOOR -\$8144 15 COMPLETE AT ~20' PRILLERS ARE HEADING TO DECON. 1700 1 CALLED SRM (B.V) | SAERI BIANCHIN PAIL HAS AND REPORTED SITE ACTIVITY FINISHED SAMPLING THE 4 PRODUCTION WELLS OFFSITE FOR TOPAY MAton 2/6/96

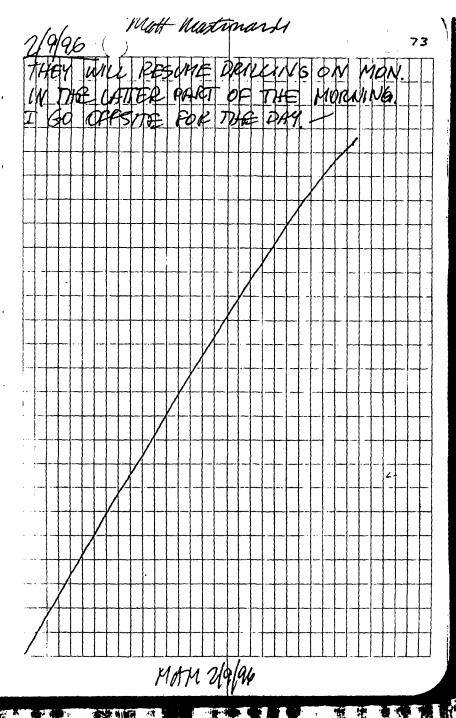
Matt Masumann WED. 2/7/96 0820 ARRIVE ONSWIF TEMA. ~35° F DUERCOST PETD WHILL DRILL TODAY AT THE ESTIE PILOT TEST CELL BORINGS THEY BE DRILLING IN LEVEL B PETER SAND THEY WILL THEY TO FINIS IS THESE BORINGS THERE ARE 4) THURSOM I RESUME W BARRIER WALL DNSITE ON ARIOAY. 10900 | EFO IS DIGILLING THE HIRST Plus TEST CELL BORING TO 201 ABOUT 8 BLG. BROWNIS LIQUID WAS DOLATING THE SOUT 10HOTO 20 FACING NE EFFO DRIVING PHOTO 21 CLOSE-UP OF A FRUM + 101 DEGO CONTAINING BROWN LICEND TIOD 137 PLOT TIGST CELL BORIEVE COMPLETE CLAY WAS ENCOUNTERED 27. THIS BORING WAS NUMBERED 11 EFD 13 STARTING ON SOIL BORN SB 225 THE 200 OFFISINE SOLL BORING EST DELL INVESTIGATION SB 225 BOUNTO 12 THIS 120101 MAN 2/7/96

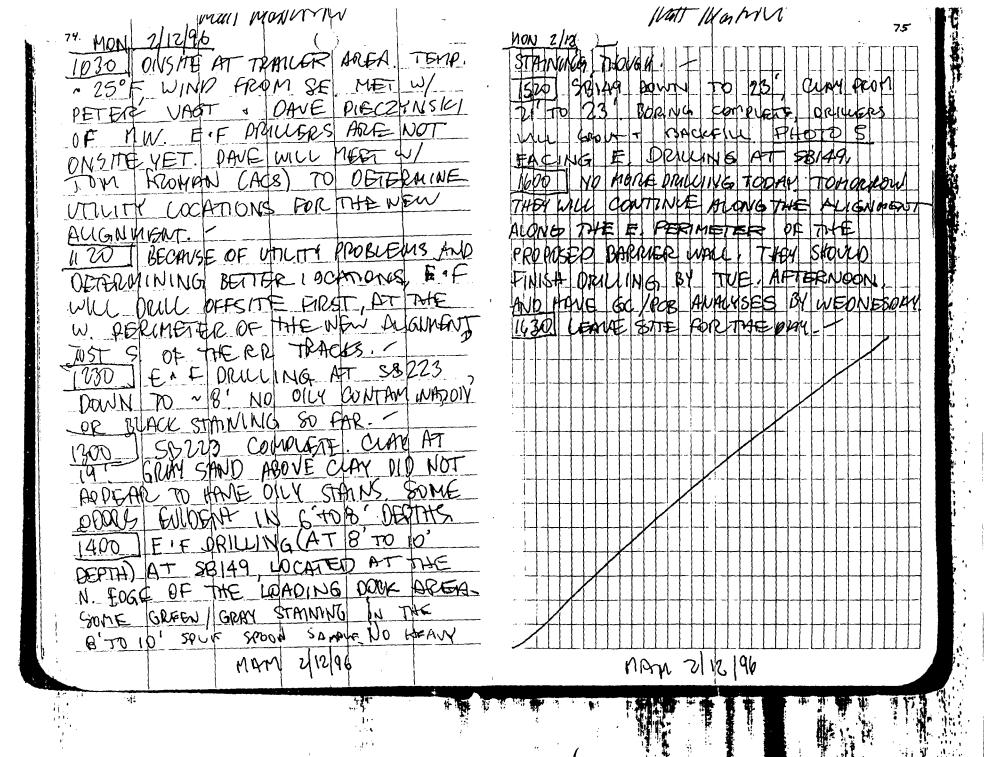
Matt Manon Ni Mutt Mustrono Mi TUE. 2/7/.) 16 7 WE 2/7/96 LIKE MATL, BUT IS MUCH LESS WASTE-FILLED TAAN SB22A, THE LET PLOT TEST CELL BORING. -1300 SB225 COMPLETE. CLARE AT 27', APPEARS TO BE CONFINING THE AVELABILITY FOR COVERAGE OF THIS WORK WASTE EFD WILL BREAK NOW FOR WHICH 1400 1 FTO SETTING UP FOR SOTTER THE 300 TEST CELL BORING. 1430 CONF. CALL HELD IN TRAILER TO DISCUSS WEEKLY PROGRESS, THE PARTICUPANTS ARE ME, DETER VAST CARTER HELM (B+V) (IN THE TRAILER) AND LANTZ (ONCELL PHONE), SHERY BLANCHN (USEPA) HOLLY SEEJOA GOEN) RON FREHMEN (CRA); DISCUSSED BARRER WALL, UDOOR + HOWER AQVIETER INVEST., SCHEOVLE. -1525 AT SB226, \$00 CONTINUES TO BRILL IN LEVEL B THIS BORING IS DOWN TO 220', AND IT HAS SOME STATING, BUT RELATIVELY MUCH LESS WHOTE THAN SB 274. 1600 S8226 COMPLETE, CLAY AT 87. 1610 CAUGO SHERI BIANCHIM TO DISCUSS COME CALL. SHE SAND MAN WYN MAM 2/7/96

Weath Matrings VIM VIMIVIVINIV. 68 MED. 2/8/96 69 0820 ARRIVE ONSITE. TEMP. 140°F. WIND PROM SWI CLOUDY SKIES. PILDT TEST CELL BORING TO CONTINUE TODAY. FPO IS SET UP ON SB227, THE POMPON 4 TEST CELL BORING; IN LEVELB AT 53227 THEY ARE DOWN TO ~ 10' SPLIT \$400NS HAVE NOT APPEANED STAINED ,-0950 SB227 COMPLETE, CLAY ROULZ FACING DRILLERA ARRIBÉTING ON AUGERS FROM REPART TO DECON- THESE BORINGS ARE FILLED W/ CUTTINGS I BENT. , PAHL HAS DIPIENTED OHPS. LARGE VOID SPACES PREVENT USE OF BROWT. 1020 ONSITE, EFO IS SETTING UP FOR A PILOT TEST CELLBORING. SBIAS. IT IS LOCATION & SO' W. OF SBILL AT SOLAS, ALBLUISH PAINT-LIKE LQUID/PUTTY 15 ON THE 13-SPUT SPOON 2140706 22+23 blue MASSEMAL and SPOON + ROOKS AT SO 149 SUSTAS IS COMPLETE SUMBLOF THE 1130 MATI ON THE AUGRES: IT IS BUVE MAD SEED IN LONGES IN THE SAND when splace WAN 5/8/00

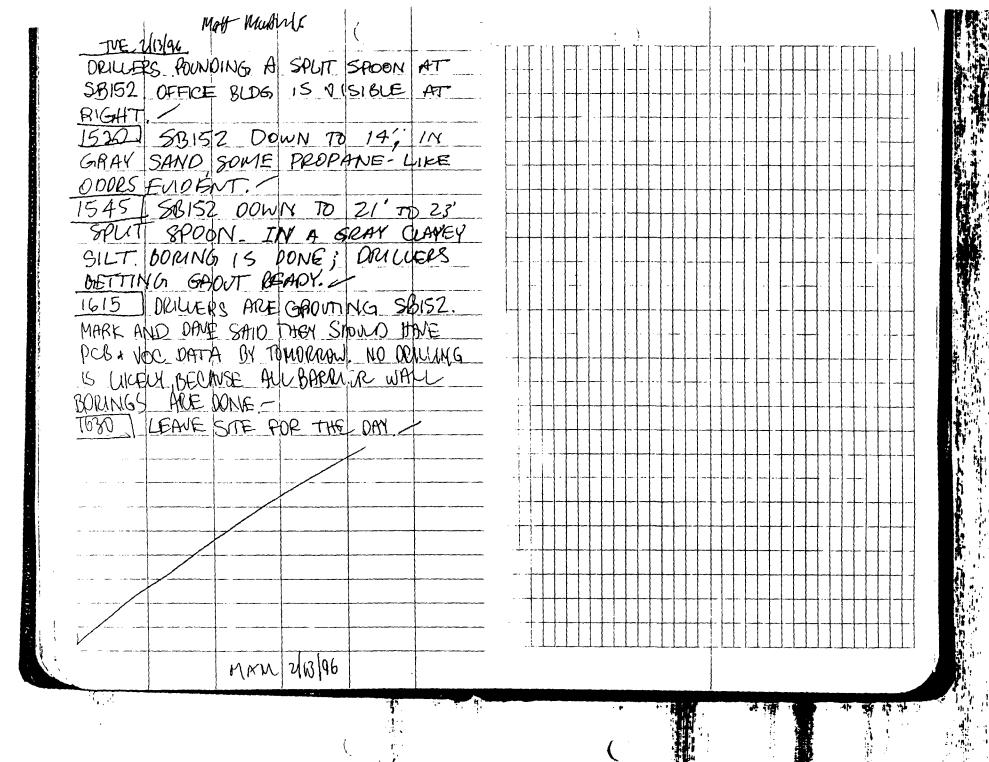
Mest Must Must Must Must all most Mastron all 18/96 PROTRUDES -2' FROM GROUND SPEFACE WATER LEVEL 15-535". 7, HITTING CONCRETE THEY HAVE MADE A FEW B.T. O.C. A WHITISH-COLOR EXP PTS AT GETTING THE DUGHI FINAU COATING WAS SPUNTTERED ON THE PROBE OF THE OUTWATER SBIAT IS COMPLETE CLARY AT SPANS OPENS GRAYS 4 STIGIN PROBE PHOTO3 CLOSE UP OF THE OIL/WATER GROBE WITH WHITE SPLATTERING ON PROBE. NO BOTTOM-DRYCLERS AND BACKFULING THE LEVER WILL BE TAKEN, TO PREVENT THE POSSIBLE CARRYING OF CONTOM. EAVEL SITE FOR THE DA DEEPER INTO THE PRIMPER. A READING OF 1.2 TO 1.6 PPM WAS FOUND AT THE TOP OF THE CASING WHEN THE CAP WAS REMOVED, 1440 AT GB 2 146, EFO IS DEILLING IN LEVEL B. THIS IS THE SECOND ONSTEL TEST CELL BORING. 520 | SBIAG IS COMPLETE SOME ODDRS WERE EUIDENT, BUT NO OBYIOUS CONTAMINATION AS IN S&145 1540 STARTING SB147, THE 300 ONSITE PILOT TEST COLL BORING. THEY WILL DOWNGRADE FROM LEVEL B TO LEVEL D BELOUSE THE FIRST 2 HAD NO PIO READINGS KIGH ENDIGH TO PEQUIFE MAN 2/8/96 MAN 7/8/94

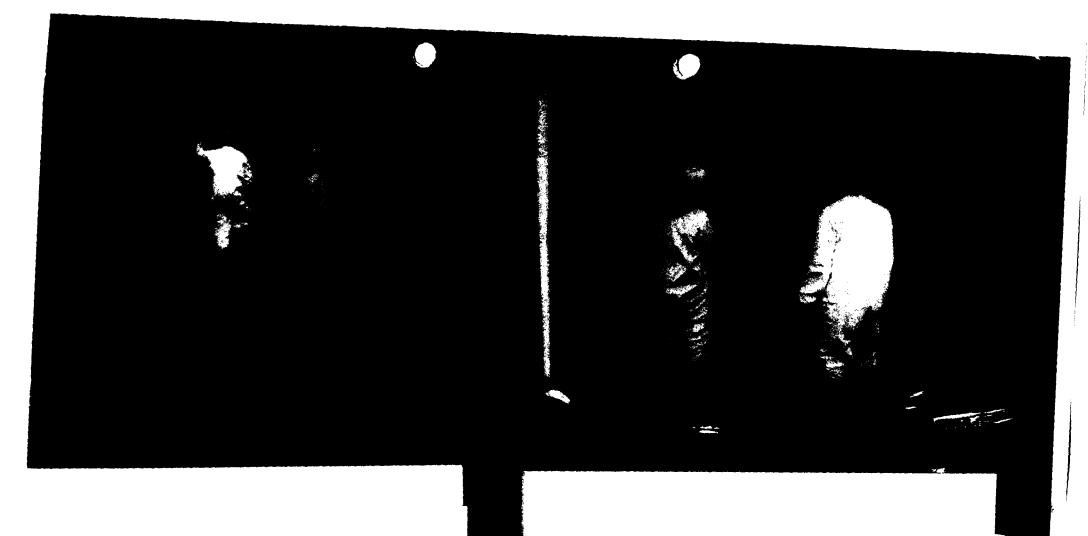
PRIDAY MATT Mastron 11 PARTO 2/9/96 OBTO JARRIUE ONSITE TENP -40°F, CLEAR SKIES FEO TO CONTINUE PILOT TEST CELL BORINGS 0900 ONSITE AT 88148 THE LAST (4+4+) TEST CELL BORNIG DRIVERS ARE WORKING IN LEVEL C. BORING IS DOWN ABOUT 15' DRILLERS ARE HOUNDING A SPLIT SPOON 0940 SOIAR IS COMPLETE, CLAY WAS HTT - 32.5: GOME OILY SHEEN WAS COSERVED. NO HEAVY PRODUCT WAS ON AUGERS. DAVE SOUD HE HAD THE WORKERS IN LOWEL C BECAUSE OF INTERNITHENT PID READINGS ABOVE 5 PPM. 1000] MSITE PCB KITS SHOWED PCBS > 10 POM IN BORINGS 138 AND MB. 143 HAD VOCS AT ~ 11000 PPM. 1415 B LOCATED PLONG THE N. EDGE OF THE ALGNMENT. PHOTO 4 FACING NORTH. Son BORING LOCATION SIS 143. PIPING + EUMOINGS PREVENTING FURTHER MORTH BORNIG UNLESS LOCATED ~ 100' FURTHER MOOTH. 1030 FED TO QUIT DANLING BARUY; (ALREADY DONE): THEY WILL LEAVE AS SOON AS THEY HAVE DONE UP DECON. MAM 2/9/06





Matt Wasmon TU# 2/13/9/ 0800 ARIWE ON SITE, TEMP, - 30°F, CLOUDY SKIES EIF 15 SET UP AT SOISO, ALONG THE E. BARRUER WALL PERIMETER THE BORING IS S. OF THE ACS FENCE, BUT N. OF THE RR HEAVING SANDS FROM BLOWING TRACKS. 0830 | SB180 DOWN to ~ 121 SOME OF THE WAREHOUSE BUILDING CREOSOTE-TYPE ODOR IN 6 70 8' SPUT SPOON, IN GRAY SAND. NO BRYDUS A VERY SOVE 0000 15 ADUND BAMPLES AT - 18', ARE - 3000 PM AT DILY CONTAMINATION, THOUGH 10920 88 180 COMPLETE AFTER 21 40 23' SPLOT SPOON. STAFF GRAY CLAY 15 EVIDENT GRAM SAND ABOVE DLAY. NO DLACK STANNING WAS SEGN, BUT SAND WAS INTO CU GRAY MOICAL OF OTHER BORINGS, -25' Interval FOR GOTTE CILLINGA SETTING UP AT SOIS! THE FUCTIVEST EAST AND NOPOTH OF THE BORINGS ONSITE 98191 15 DAMPLETTE DELLUTERS ADJE 1025 | SB151 | DOWN TO ~ 12' PHOTO 6 CLOSE UP OF THE 3. 105' DALLIGIAS ARE DECONVING AUGUS SPUIT Shoom SAMPLE PROH SBISI SHOWING THE COLOR CHINGE PROIN NEAR THE ME CORNER CLEAN BROWN TO GRAY GAND. 8' MOSTLY 035 | S0151 DULLING CONTINUES USING 3-INCH SPLIT SPOONS FOR CONTINUOUS SAMPUNG, BECAUSE Apoil SOIL UDLUME MAN 2/13/96 MAN 2/13/96 雅 北北 •





Site: American Chemical Services, Inc. RD/ERA

Proj. #: 71670

Roll: Photo #: 1 Date: 1/18/96 Time: 0830

Photographer: Matt Mastronardi

Description: Facing southeast. Drillers are retrieving the 6' to 8' split

spoon at SB104 along the ACS railroad spur. Black stained cuttings are visible on plastic in the foreground. Site: American Chemical Services, Inc. RD/ERA
Proj. #: 71670
Roll: 1 Photo # 6

Date: 1/18/96

Photo #: 2 Time: 1115

Photographer: Matt Mastronardi Description:

Facing southeast. Drilling at SB106; stained cuttings are

American Chemical Services, Inc. RD/ERA

Proj. #: 71670

Roll: 1 Photo #: 3 Date: 1/18/96 Time: 1115

Photographer: Matt Mastronardi

Facing northwest. Soil boring SB106, as a soil sample is Description:

collected from the black-stained split spoon from 3-1/2 to

5-1/2 feet below land surface.

Site: American Chemical Services, Inc. RD/ERA Proj. #: 71670

Roll: 1

Date: 1/19/96

Photo #: 4 Time: 0930

Description:

Photographer: Matt Mastronardi

Facing south. Collection of a soil sample from SB108, from a depth of approximately 15 feet below land surface. The grayish sand is typical of the soil found at this depth

Site:

American Chemical Services, Inc. RD/ERA Proj. #: 71670

Roll: 1 Date: 1/19/96

Photo #: 5 Time: 1040

Photographer: Matt Mastronardi

Description:

Facing northwest. Drilling at offsite location SB205, adjacent to the Griffith Landfill.

Site: American Chemical Services, Inc. RD/ERA

Proj. #: 71670

Roll: 1

Date: 1/19/96

Photo #: 6 Time: 1200

Photographer: Description:

Matt Mastronardi

Split spoon sample from SB205 showing stiff gray clay, collected from approximately 22' below land surface.

Site: American Chemical Services, Inc. RD/ERA Proj. #: 71670

Roll: 1 Photo #: 7 Date: 1/19/96 Time: 1435

Photographer:

Matt Mastronardi Description.

Field analyses of volatile organics were performed with these 2 gas chromatograph units shown inside the 1 d

Site: American Chemical Services, Inc. RD/ERA Proj. #: 71670

Roll: 1

Date: 1/22/96

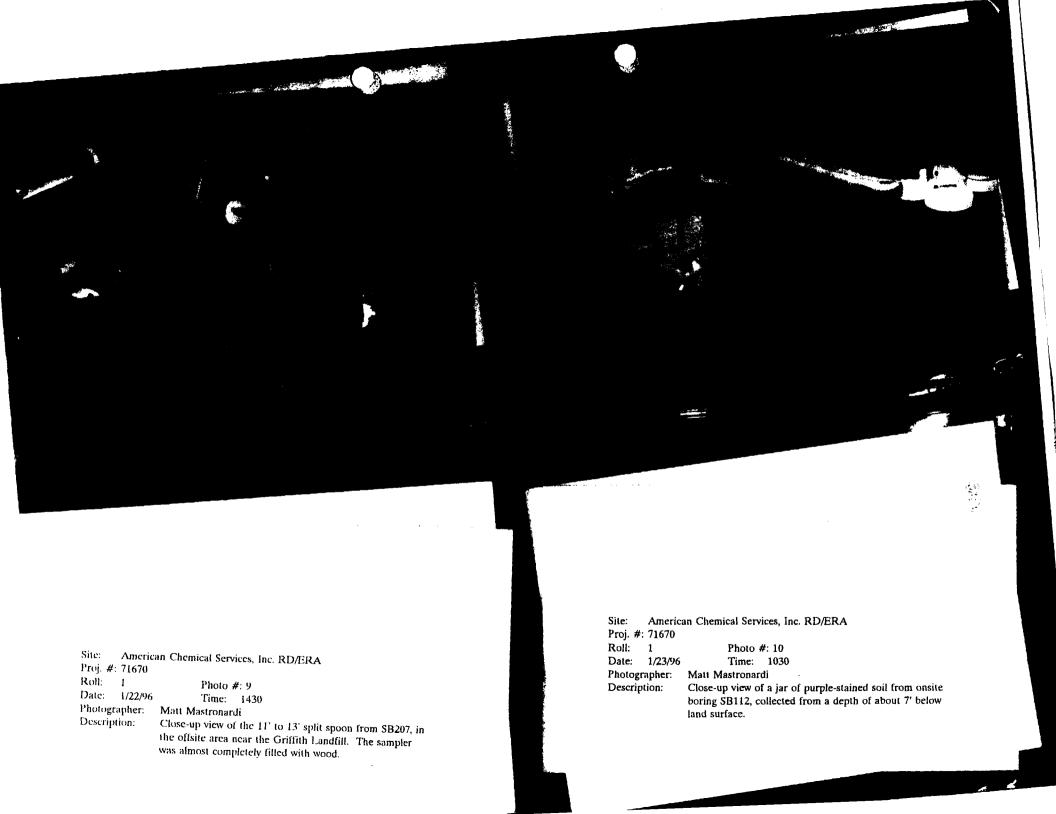
Photo #: 8 Time: 1225

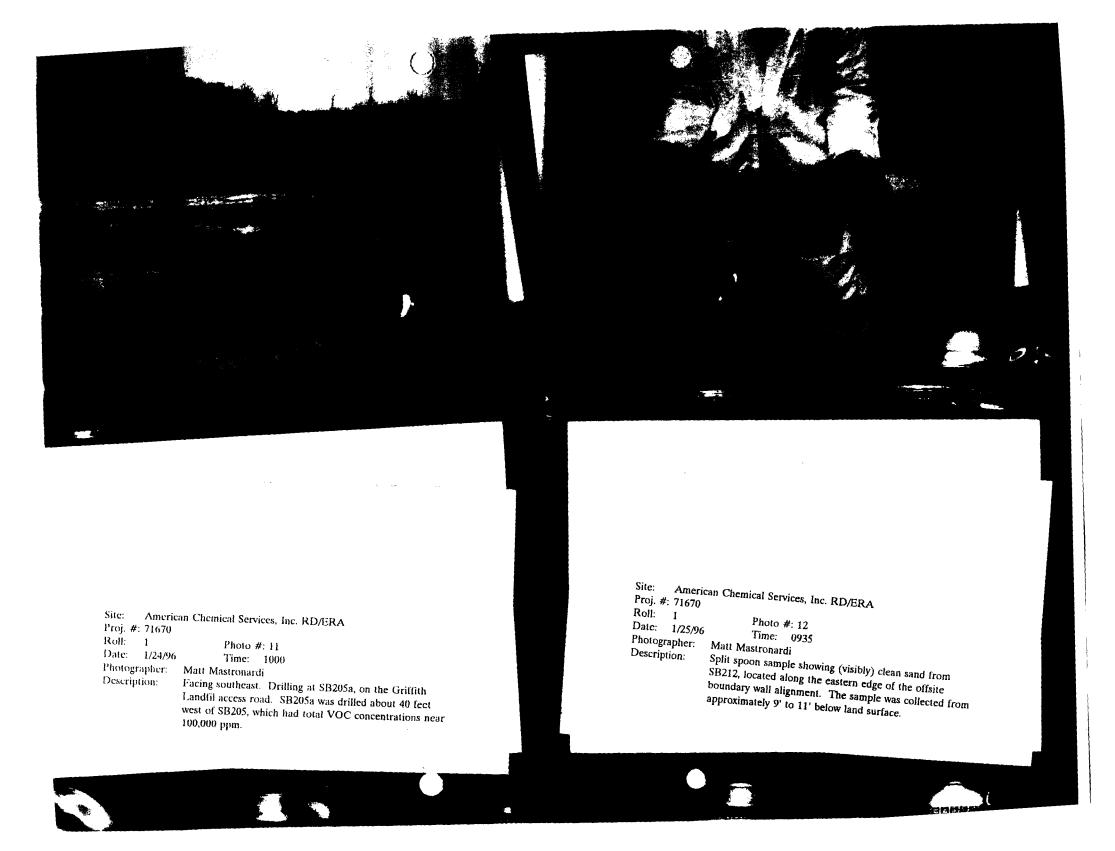
Photographer:

Matt Mastronardi

Description:

Close-up view of silty sand in a split spoon from SB206, from a depth of 21' to 23' below land surface. This sand is representative of the heaving sands which often flowed into hollow-stem augers during drilling.







Site: American Chemical Services, Inc. RD/ERA Proj. #: 71670

Roll: 1

Date: 1/25/96 Photographer:

Photo #: 13 Time: 0935

Description:

Matt Mastronardi

Split spoon sample from 15' to 17' below land surface at SB212, which shows stained sand occurring near the water table.

Site: American Chemical Services, Inc. RD/ERA

Proj. #: 71670

Roll: 1 Date: 1/26/96

Photo #: 14 Time: 1150

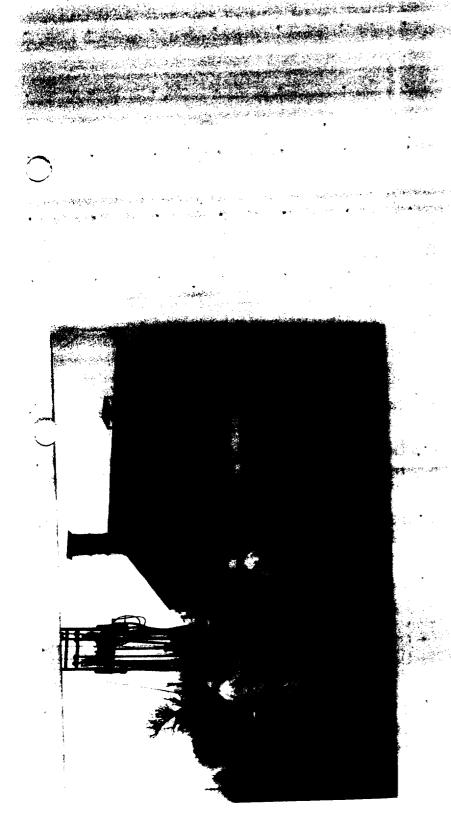
Photographer:

Matt Mastronardi

Description:

Facing east. Drilling at onsite boring SB125, an

abandoned corrugated plastic water line was encountered. Oily black material was also brought up with the cuttings.



Sue: American Chemical Services, Inc. RD/ERA Proj. #: 71670

Roll: 2 Date: 2/13/96

Photo #: 8 Time: 1500

Matt Mastronardi Facing south. Drillers driving a split spoon at SB152, near the ACS office on the right. Photographer: Description: